



FINAL SUMMARY

BIOLOGY COMMITTEE MEETING

Tuesday, May 14, 2019

San Juan College, Farmington, NM

BIOLOGY COMMITTEE (BC) MEMBERS:

Benjamin Zimmerman, BC Alternate
Jacob Mazzone
Brian Westfall
Stephen Davenport
Mark McKinstry
Benjamin Schleicher
Vincent Lamarra
Matthew Zeigler
Harry Crockett
Tom Wesche
Absent
Absent

REPRESENTING:

Southern Ute Tribe
Jicarilla Apache Nation, Chair
Bureau of Indian Affairs (BIA)
U.S. Fish and Wildlife Service, Region 2
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service, Region 6
Navajo Nation
State of New Mexico
State of Colorado
Water Development Interests
Bureau of Land Management
Conservation Interests

COORDINATION COMMITTEE (CC) MEMBERS:

Jason Davis
Dale Ryden
Ryan Christianson
Rolf Schmidt-Petersen
Jojo La

REPRESENTING:

U.S. Fish and Wildlife Service Region 2
U.S. Fish and Wildlife Service Region 6
U.S. Bureau of Reclamation
State of New Mexico
State of Colorado

PROGRAM OFFICE (PO):

Melissa Mata, Program Coordinator
Scott Durst, Science Coordinator
Eliza Gilbert, Biologist

U.S. Fish & Wildlife Service, Region 2
U.S. Fish & Wildlife Service, Region 2
U.S. Fish & Wildlife Service, Region 2

OTHER INTERESTED PARTIES:

Nate Franssen
Christina Noftsker, CC Alternate
Collen Cunningham
Deb Freeman
Carrie Padgett, BC Alternate
Steve Platania
Michael Farrington
Aaron Wedemeyer
Jacob Mortensen
Stephani Clark Barkalow
Brian Hines
Lee Traynham

U.S. Fish and Wildlife Service, Region 2
State of New Mexico
State of New Mexico
State of New Mexico
Water Development Interests
American Southwest Ichthyological Researchers
Utah Department of Wildlife Resources
U.S. Bureau of Reclamation

Susan Behery
Dex Lewis
Bobby Duran, BC Alternate
Weston Furr
Tracy Diver
Steve Mussmann
Jerrod Bowman
Anthony Begay
Ron Bliesner, BC Alternate
Melissa Trammel
Ken Hyde
Jamie Shockey
Arron Chavez

U.S. Bureau of Reclamation
U.S. Bureau of Reclamation
U.S. Fish and Wildlife Service Region 2
Navajo Nation
Navajo Nation
Keller Bliesner Engineering LLC
National Park Service (NPS)
National Park Service
City of Farmington
San Juan Water Commission

Introductions and changes to agenda

There was a round robin of introductions and the agenda was slightly modified to accommodate additional time for Behery's arrival to the meeting. McKinstry budget agenda items moved up.

Approve draft summaries from prior BC meeting; review Action Item list

No additional comments, Wesche motioned to approve February BC meeting summary and Crockett seconded and the motion passed with no objections.

Potential impending budget issues (Funding, Possible Shutdown and effect of a continuing resolution– McKinstry

Last June, funding shifted from power revenues to appropriations and this applied to 2019. In September, notice was given that the budget was provided in a Department of Energy bill. Since the funds now come through appropriations, funds will not be guaranteed under a continuing resolution. Under appropriations, with a continuing resolution or a shutdown all work will have to stop. If funds are reduced through a continuing resolution, decisions on what projects get canceled may be required. In the near future, cost of living adjustments will not occur. Funding in the House bill is only FY 2020 and Reclamation is working on incorporating recovery programs into FY 2022 budgets. All partners now have their funding obligated with the exception of Navajo Nation.

Reclamation 2019 proposal maintenance release – Behery

The maintenance release is part of Reclamation's plan to be able to release 5,000 cfs and based on a recommendation from their Technical Service Center (TSC). The release will be timed to match Animas River runoff. The original proposal was for a day but the BC suggested additional days. Precipitation in March increased the available water calculation and the proposal was increased to 5 days, which also meets TSC's report recommendation. If Reclamation is meeting 10,000 cfs downstream, Reclamation will continue to make the release for additional time to meet the 5 day flow target. Snowpack is 150% of average but meeting a 10,000 cfs target will depend on how the Animas system melts. Meeting the Animas peak is hard to achieve given Reclamation provides a 7 day notice as a courtesy to the public. This is the only system where the public is given that much notice and Reclamation may consider exploring reducing the amount of notice they provide. The maintenance release is not in the flow recommendation decision tree and effects of this release on meeting flow targets has not been considered. Reclamation considered meeting the 8,000 cfs flow target (an increase of flows from 5 to 12 days) but did not have enough time to communicate this to the public. Reclamation will be conducting cross sectional and sediment surveys to better understand the

system's response. If the decision tree had been followed, the SJRIP would have 22,000 acre feet to conduct flow management. Lake elevation is anticipated to end at 6059.

In 2017, releases triggered a National Weather Service's (NWS) flood warning. Now that the release is planned, NWS will have resources available to deal with a trigger. If the flood warning does not cause flooding it will demonstrate a 5,000 cfs release can be realized without causing damage. The release will move sediment and push back floodplain encroachment. The Office of Emergency Management does not think there will be issues with structures in the floodplain. Reclamation and U.S. Geological Survey conducted a river trip and saw some garbage in the floodplain. San Juan County has started to institute floodplain management and now has a floodplain manager and enforcement officer.

Behery will provide the response to comments on the Maintenance Release proposal to the PO for distribution to the BC.

Colorado Pikeminnow adaptive management stocking plan – Zeigler

Zeigler did not receive any comments from BC members. However, the Program Office wanted to discuss an option to consider within the Colorado Pikeminnow adaptive management stocking plan (plan). Zeigler reminded the BC of the preferred management action with two decision points. First, if the projected available water on April 1st is enough for a 21-day release of 5,000 cfs from Navajo Dam, no fish are produced. Second, if fish are produced, the decision to stock them will be based on the density of age-0 Colorado Pikeminnow captured during small-bodied monitoring. If the density of age-0 Colorado Pikeminnow is less than 0.6 fish/10m², then hatchery fish will be stocked. The plan decision point for a spring release is based on the available water for Navajo Reservoir being large enough to meet or exceed the 5,000 cfs flow recommendation. However, given this unusual wet year on the Animas River and its significant contribution, the Program Office recommends that the contribution from the Animas River should be considered in the decision point when determining whether age-0 Colorado Pikeminnow will be produced or not for this year. This option may be rare, but needs to be considered. Therefore the Program Office (PO) proposes to the BC that Southwestern Native Aquatic Resources and Recovery Center (SNARRC) not produce age-0 Colorado Pikeminnow for stocking in the San Juan River in FY19. The rationale for not producing and stocking Colorado Pikeminnow in the San Juan River in 2019 is the expectation of wild reproduction and recruitment of these wild individuals to the young-of-year life stage due to the high magnitude and long duration of spring runoff anticipated in the San Juan River in 2019. Record numbers of wild Colorado Pikeminnow larvae and young-of-year were captured in 2016 and 2017 following high magnitude and long duration spring runoff. The PO recommended not producing or stocking age-0 Colorado Pikeminnow to minimize potential negative interaction between wild-spawned and hatchery-reared con-specifics and to allow for the tracking of a wild cohort of Colorado Pikeminnow in subsequent years. The BC is in support of the PO proposal and believes the Program is in a great position to have the ability to stock or not stock Colorado Pikeminnow indicating that there is progress toward recovery. The PO will inform SNARRC to not produce Colorado Pikeminnow for FY19. In addition, the BC chair will provide an update to the Coordination Committee in the coming days regarding this recommendation. The PO will coordinate with NMDGF in updating the Colorado Pikeminnow adaptive management stocking plan.

Discuss draft FY 2020 Annual Work Plan – BC

A general comment was expressed by a BC member that FY2020 work plan and previous years' work plans have more focus on Razorback Sucker than Colorado Pikeminnow. The data collected on Colorado Pikeminnow is generally ancillary to the main study objectives which focus on Razorback

Sucker. The Program needs to begin projects that are tailored to better understanding of Colorado Pikeminnow life history, habitat use and recruitment.

New SOW 1 was intended to address larval fish emigration over the waterfall. A common thread of the comments was that while the proposal would determine emigration rates, the BC preferred to understand this in the context of the overall river. For example, if 100,000 larvae go over the waterfall how many still remain in the river? This is a larger question than that addressed in the SOW. PIs withdrew the SOW and will develop a 2021 SOW that can better answer the BC's larger question.

Fish surviving below the waterfall would count toward recovery once recruitment by the species is demonstrated. This is why investigations below the waterfall are occurring. However, New SOW 1 would not address the fate of fish that go over the waterfall but would help understand the dynamics of retention in the river. The current Kansas State University SOW is estimating Razorback Sucker population below the waterfall but too few Colorado Pikeminnow are captured to conduct an estimate.

New SOW 2 is proposed for two years and is a management action and assessment of the action. The PIs will trap and transport fish above the waterfall, track these fish, and those moved through PNM to assess how moved fish contribute to spawning.

New SOW 3 proposes to mechanically open the mouths of secondary channels. The main concern from the BC was permitting feasibility and PIs were asked to figure out permitting constraints.

New SOW 4 is a 20% feasibility engineering design and cost estimate for fish passage at APS and the waterfall. The work would be conducted by Reclamation's Technical Services Center (TSC), who in conjunction with Service and other fish passage experts, visited sites and developed potential ideas. The SOW would inform preferred approaches and support the NEPA process. The SOW could be paid for using capital funds. That would not affect the Fruitland or Upper Colorado River Endangered Fish Recovery Program (UCREP) projects as those are delayed. The Office of Management and Budget is unlikely to become involved in fiscal year (FY) 2020 expenditures since the President's budget has been developed.

New SOW 4 will provide substantial ideas to consider. APS should be easier to decide upon especially because there is some outside funding (APS). Solutions to the waterfall may include concurrence from National Park Service (Park Service) since it is within lands they manage. Moving a structure to Clay Hills would reduce risk that it would be inundated if lake elevation rose. Construction would have to go through the Park Service's NEPA process and they would like the SJRIP to contract a feasibility study for better trapping and transfer methods to use as comparison to building fish passage. Reclamation engineers thought opening the old channel and construction of a selective passage was feasible.

When the SJRIP gets to a decision point about the waterfall, it will be important to understand how fish Razorback Sucker and Colorado Pikeminnow below the waterfall contribute to recovery, the best method for fish movement upstream, and the need for movement upstream. Millions of dollars in fish passage have been constructed around the Colorado River Basin, including PNM in the San Juan River, and none of them had as much evidence (in the form of PIT tag detections or physical captures) that fish wanted to move upstream as what we have at Piute Farms Waterfall. Over 2,000 ESA fish have either been detected or captured at the waterfall in the last 3 years. Additionally, New

SOW 2 will provide information on Razorback Sucker behavior once moved above the waterfall. Most Razorback Sucker in the San Juan arm of Lake Powell are fish stocked in the San Juan River but there are some from the Colorado and Green rivers (35% of fish tagged in the Colorado River arm of Lake Powell moved to the San Juan arm; one fish stocked in the Green River made a 345 mile migration as it was recaptured in the San Juan - after transported above the waterfall). The bottleneck is at the waterfall as fish move back through the lake to the Colorado River as was demonstrated by a San Juan River fish detected at Tusher Wash in the Green River. The Peer Review report suggested the Upper Colorado River should be managed as a metapopulation. The report did not explain what that would mean and there is currently no management of this species in the lake. The information about the fish below the waterfall and transbasin movement has been developed within the last few years and presented to the BC at recent meetings. This is emerging information and a reason an overview of current data and its contribution to recovery would be useful to justify and prioritize projects.

New SOW 5 has multiple aspects: a workshop, subsequent work, re-doing research from 2008-2009, and assessment of Colorado Pikeminnow habitat use. The PIs will work through comments and possibly produce a substantially changed SOW.

The budget for PNM (SOW-15) and NAPI ponds (SOW-11) may be reduced – Navajo Nation has acquired outside funding to support that work.

SOW-17 to remove nonnative fish was submitted. The purpose of the Channel Catfish diet study was to determine the level of predation on endangered fishes so a commensurate level of removal could occur. The current nonnative SOW is a placeholder and requires approval before the diet study results are complete, but the SOW could change substantially once those results are provided and incorporated. There was not 100% BC support for the SOW but the Service still has a memo in place stating nonnative fish are a threat and removal should occur.

SOW 32 includes addition of a pit tag antenna at Hogback and would allow evaluation of the fish passage there. Keller Bliesner Engineering recently suggested interference with the antennas could be fixed with \$25,000. It would be good to have all the antennas at Hogback working, especially since the fish passage is dry when the irrigation canal is not running.

Potential 2021 projects to start thinking about – McKinstry

What can we actually get started doing? The BC should consider the following ideas: 1) continue McElmo stocking, 2) stock Razorback Sucker into Lake Powell and 3) pursue an effort to radio-tag Colorado Pikeminnow in the Animas and work directly with Southern Ute Tribe. These are all efforts that some feel could further the Program progress toward recovery.

Razorback Sucker 2018 cohort recruitment – BC

This update is related to the spring sampling effort to detect over-winter survival of Razorback Sucker. In total, 45 were collected. It was interesting that Razorback Sucker were detected all the way down to Slickhorn, even though not many were captured until Four Corners Bridge.

Planning/Priorities for the Habitat restoration workshop – BC

Update on Phase 3 discussion at CC – PO

First, the PO provided an update on Phase 3. The BC should have received a response from the CC responding to the BC memo requesting approval for funding for the implementation of the Phase III Habitat Restoration Project. The CC held a meeting on April 21, 2019 to discuss this request. They

approved the funding for the Phase III habitat restoration project, and directed with the stipulation the PO to move forward with the planning of a Habitat Workshop. The Workshop will focus on options for providing nursery habitat for larval endangered fishes and concurrently move forward on multiple habitat and fish passage projects using capital funds.

The PO is seeking guidance from the BC and CC on what individuals would like to see come from a habitat workshop. It is the opinion of the PO that there are varying expectations and the PO would like the opportunity at the annual meeting for BC and CC members to discuss these expectations. Following the habitat planning exercise at the annual meeting the PO will start planning for a habitat workshop.

Fish passage at APS and Piute Farms Waterfall – McKinstry, Franssen, Gilbert

This topic was already discussed during the AWP discussions in the morning.

Razorback Sucker augmentation plan – Furr

Razorback Sucker augmentation plan has been updated to include the most recent information on apparent survival rates and was shared with the BC via email on May 8, 2019. Furr is asking for review and comment from the BC by June 30, 2019. The Razorback Sucker Plan will be finalized prior to the next RBS stocking effort for FY19.

Hidden Ponds kettle construction – Bowman

Navajo Nation acquired funds through Bureau of Indian Affairs to construct a kettle at Hidden Pond, approximately \$500,000 for construction. Aquatic Consultants designed and constructed the kettle. Bowman presented a drone video showing the steps of construction.

Update on stocking larval Razorback Sucker in McElmo Creek – Bowman

Approximately 300,000 larvae were stocked on 11 April 2019. These excess fish, produced and hatched on 2 April 2019, were marked with oxytetracycline on 9 April. Fish were tempered for 45 minutes prior to release.

Post 2023 next steps – Mata

The PO obtained guidance from the BC and will develop a draft table for the BC to revise/review, which will then go to the CC for use in an exercise to determine program priorities post-2023. The PO will develop a straw dog of actions based on the guidance provided by the BC in February. An in-person meeting to discuss of actions with low, moderate and high confidence of achieving recovery may be in order and possibly added to the habitat workshop.

Peer Review Report – Durst

The Peer Review report suggested Razorback Sucker be managed as a meta-population and include Lake Powell. This may be worth considering but it is difficult to identify what management actions would change or be implemented. However, determining what managing a metapopulation means may not be a task assigned to Peer Reviewers. In regards to Lake Powell, the most pressing concern for the San Juan at the moment is understanding how much evidence there was for natural recruitment in the lake. Two Peer Reviewers will be retiring. There are no current plans to replace them. If Program participants want to make any adjustments to this they should let Mark McKinstry know.

Recap decision points/assigned action items and upcoming annual meeting

A doodle poll for the next BC meeting will be set-up to review and recommend the second draft of the FY2020 AWP. Action items from this meeting are listed in attached table.

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 10 June 2019)						
Item No.*	Action Item	Meeting/Ori gination	Responsible Party(s)	Due Date	Revised Due Date	Date Completed
1	Provide RBS/CPM stocking/capture/recapture data		PIs to PO	Before Jan. 1		
2	Provide Preliminary Draft Report Presentations		PI	At Feb. meeting		
3	Review LRP		BC	At fall meeting		
4	Review Peer Review Comments from the February and May meetings		BC	At fall meeting		
5	Provide Draft Reports		PIs to PO	By end of March		
6	Scopes of Work		PIs to PO	By end of March		
7	Provide Final Reports		PIs to PO	By end of June		
8	Annual Data Delivery		PIs to PO	By June 30		
9	T&E Species Data		BC to PO	By Dec. 31		
10	Compile T&E data and Program progress into summary to address overall Program recovery goals/objectives for presentation		PO/BC	At May meeting		
11	Distribute consolidated data and list of annual data collected and available in the Program's database		PO to BC	By Jan. 31		
12	Recapture analysis on PIT tagged fish		Durst	By March		

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 10 June 2019)						
Item No.*	Action Item	Meeting/Ori gination	Responsible Party(s)	Due Date	Revised Due Date	Date Completed
13	Coordinate CPM stocking closely with BOR to avoid negative impact due to high flows/releases		PIs	Annually		
14	Revise RBS Augmentation Goals (based on the outcome of experimental stocking and analysis by Franssen and Durst). What is the appropriate numbers of fish to stock?	5/10/10	NMFWCO/PO	05/2011 – provide update and extend as needed	Ongoing	
15	Pursue effects study on Hg/Colorado Pikeminnow with other groups/programs	1/14/10	PO lead		Ongoing	
16	Include benchmarks for recovery in LRP (amended to also included in Pathways document and monitoring protocols)	12/5/14	Mata	01/5/2015	Ongoing	
17	Status updates for the LRP	12/2/15	PIs to Mata	02/23/2016	Ongoing	
18	Make Program peer-reviewed publications available to Program participants	11/29/16	PO (Mata)	02/21/2017	Ongoing	
19	Disposition of Razorback <300 mm TL	02/21/17	NMFWCO	05/16/2017	Ongoing	11/28/2017 TBD 2019
20	Draft a plan for Colorado Pikeminnow stockings	02/21/17	PO, NMFWCO, and NMDGF	02/21/2017	Ongoing	
21	Coordinate aerial flights for base flow imaging	11/28/17	BC (Lamarra)/PO (Franssen)	Fall	Ongoing	
22	Develop a habitat workshop	02/21/19	PO	05/14/19	Fall 2019	
23	Response to BOR Maintenance Release Proposal	05/14/2019	BOR (Behery)	05/21/2019		

BIOLOGY COMMITTEE ACTION ITEM LOG (Updated 10 June 2019)						
Item No.*	Action Item	Meeting/Ori gination	Responsible Party(s)	Due Date	Revised Due Date	Date Completed
24	Update Colorado Pikeminnow adaptive management stocking plan	05/14/2019	NMDGF and PO	Nov. 2019		
25	Provide update to CC on not stocking CPM in FY19	05/14/2019	BC Chair	05/16/2019		
26	PO will inform SNARRC to not produce CPM for FY19	05/14/2019	PO	05/21/2019		
27	Revised SOWs and response to comments	05/14/2019	PIs	06/14/2019		
28	Revised Razorback Sucker augmentation plan review and comments	05/14/2019	BC	06/30/2019		
29	Final Razorback Sucker augmentation plan	05/14/2019	NMFWCO (Furr)	Nov. 2019		
30	Doodle poll for second draft of AWP in July 2019	05/14/2019	PO	05/30/2019		
31	APS present on Morgan Lake to Coordination Committee after one year of operation.	02/20/18	APS	05/30/2019		05/16/2019
32	Maintenance Release proposal for 2019	02/21/19	BOR	03/30/19		03/28/2019
33	New Waterfall SOW	02/21/19	KSU	03/30/19		05/14/2019
34	McElmo Project updated SOW	02/21/19	Navajo Nation/BOR	03/30/19		05/14/2019
35	Phase III re-recommendation memo	02/21/19	BC Chair	03/01/19		03/11/2019
36	BC comments to PO on Phase III responses to CC concerns	02/21/19	BC to PO	02/28/19		02/28/2019
37	Phase III presentation in May if not sooner	02/21/19	BIA/PO	05/15/19		4/28/2019

BIOLOGY COMMITTEE ACTION ITEM LOG
(Updated 10 June 2019)

Item No.*	Action Item	Meeting/Ori gination	Responsible Party(s)	Due Date	Revised Due Date	Date Completed
38	Nonnative Fish Removal SOW	02/21/19	NMFWCO	03/30/19		05/15/2019
39	RBS Augmentation Plan	02/21/19	NMFWCO	05/15/19		05/15/2019
40	Send Comments on Stocking Adaptive Management Plan to NMDGF	02/21/19	BC	03/18/19		03/18/2019

*Items were re-numbered after changes were made

Yellow highlight indicates annual action items

Green highlight indicates new action item

Red highlight indicates completed action items